REMARKS

Claims 1-39 were pending in the Application. In the Office Action, claims 1-39 were rejected. Applicants respectfully request reconsideration and favorable action in this case in view of the following.

SECTION 102 REJECTION

The Examiner rejected claims 1-39 under 35 U.S.C. § 102(a) as being anticipated by Wasserman et al., U.S. Patent Publication 2003/0048276 (hereinafter *Wasserman*). Applicants respectfully traverse the rejection of claims 1-39.

Independent Claim 1

Applicants have amended independent claim 1 to more clearly recite the invention of claim 1. As amended, independent claim 1 recites in part:

> a switching fabric operable to dynamically couple select one or more . . .
> visualization resource units to select one or more . . . compute resource units
> for generating at least one graphical image from a plurality of graphical
> images

The Examiner is relying on "bus 104" and "request arbiter 705" of *Wasserman* to teach the "switching fabric" of claim 1. According to *Wasserman*, "[t]he 3-D graphics system 112 may be coupled to the bus 104 by, for example, a crossbar switch or other bus connectivity logic," *see* paragraph 49 of *Wasserman*. Applicants submit that the bus 104 of *Wasserman* is not operable to "dynamically couple select one or more of the . . . visualization resource units to select one or more . . . compute resource units" as required by independent claim 1.

Furthermore, according to *Wasserman*, "[t]wo requestors 709 may be configured to assert requests based on a corresponding channel's actual demand for display information. An arbiter 705 intercepts the channels' requests and selects one of the channels' requests to forward to the display information buffer 701," *see* paragraph 94 of *Wasserman*. Applicants submit that the arbiter 705 of *Wasserman* is not operable to "dynamically couple select one or more . . . visualization resource units to select one or more . . . compute resource units" as required by independent claim 1.

Furthermore, according to *Wasserman*, "[i]n many situations, it may be useful to synchronize the vertical blanking intervals of multiple display channels . . . For example, if the displays in a stereo display system are not synchronized, the left image and right image

may not display left- and right- eye views of the same image at the same time, which may disorient the viewer," *see* paragraph 174 of *Wasserman*. However, Applicants submit that *Wasserman* does not teach or suggest "generating at least one graphical image from a plurality of graphical images" as required by amended independent claim 1.

Dependent Claim 4

Claim 4 recites "a second switching fabric coupling the compositors to the plurality of graphics pipelines". The Office Action directs the Applicants to "[p]ages 2-3, Paragraphs 44-57; *display timing generators, master/slave, synchronization of data streams,* Page 15, Paragraphs 173-180." Applicants did not find any teaching or suggestion for "a second switching fabric", let alone "a second switching fabric coupling the compositors to the plurality of graphics pipelines" in the cited portion of *Wasserman*.

Independent Claim 9

Applicants have amended independent claim 9 to more clearly recite the invention of claim 9. As amended, independent claim 9 recites in part:

> a switching fabric . . . operable to dynamically selectively couple outputs of the plurality of first compute resource units to inputs of the plurality of second compute resource units, the first and second plurality of compute resource units operable to function together to generate at least one execution result

The Examiner is relying on "bus 104" and "request arbiter 705" of *Wasserman* to teach the "switching fabric" of claim 9. According to *Wasserman*, "[t]he 3-D graphics system 112 may be coupled to the bus 104 by, for example, a crossbar switch or other bus connectivity logic," *see* paragraph 49 of *Wasserman*. Applicants submit that the bus 104 of *Wasserman* is not operable to "dynamically selectively couple outputs of the plurality of first compute resource units to inputs of the plurality of second compute resource units" as required by independent claim 9.

Furthermore, according to *Wasserman*, "[t]wo requestors 709 may be configured to assert requests based on a corresponding channel's actual demand for display information. An arbiter 705 intercepts the channels' requests and selects one of the channels' requests to forward to the display information buffer 701," *see* paragraph 94 of *Wasserman*. Applicants submit that the arbiter 705 of *Wasserman* is not operable to "dynamically selectively couple

outputs of the plurality of first compute resource units to inputs of the plurality of second compute resource units" as required by independent claim 9.

Furthermore, according to *Wasserman*, "[i]n many situations, it may be useful to synchronize the vertical blanking intervals of multiple display channels. . . For example, if the displays in a stereo display system are not synchronized, the left image and right image may not display left- and right- eye views of the same image at the same time, which may disorient the viewer," *see* paragraph 174 of *Wasserman*. However, Applicants submit that *Wasserman* does not teach or suggest "first and second plurality of compute resource units operable to function together to generate at least one execution result" as required by amended independent claim 9.

Independent Claim 22

Applicants have amended independent claim 22 to more clearly recite the invention of claim 22. As amended, independent claim 22 recites in part:

> means for dynamically selectively coupling one or more outputs of the first
> resource means to one or more inputs of the second resource means

The Examiner is relying on "bus 104" and "request arbiter 705" of *Wasserman* to teach the "means for dynamically selectively coupling" of claim 22. According to *Wasserman*, "[t]he 3-D graphics system 112 may be coupled to the bus 104 by, for example, a crossbar switch or other bus connectivity logic," *see* paragraph 49 of *Wasserman*. Applicants submit that the bus 104 of *Wasserman* is not "means for dynamically selectively coupling one or more outputs of the first resource means to one or more inputs of the second resource means" as required by independent claim 22.

Furthermore, according to *Wasserman*, "[t]wo requestors 709 may be configured to assert requests based on a corresponding channel's actual demand for display information. An arbiter 705 intercepts the channels' requests and selects one of the channels' requests to forward to the display information buffer 701," *see* paragraph 94 of *Wasserman*. Applicants submit that the arbiter 705 of *Wasserman* is not "means for dynamically selectively coupling one or more outputs of the first resource means to one or more inputs of the second resource means" as required by independent claim 22.

Independent Claim 29

Independent claim 29 recites:

> A method of controlling and allocating compute resources, comprising:
> receiving a graphics visualization job to be executed by a plurality of compute resources;
> determining compute resource requirements for the job;
> determining compute resource availability;
> allocating compute resources from the plurality of compute resources in response to the determined compute resource requirements and availability;
> determining destinations to receive results of the job; and
> allocating and configuring communication channels from the allocated compute resources to the determined destinations.

In rejecting independent claim 29, the Office Action simply states, "receiving a graphics visualization job to be executed; allocating resources in response to requirements and availability; allocating and configuring communication channels (see *arbiter* above, Page 4, Paragraph 67; Page 6, Paragraphs 90-96)."

It appears that the Examiner is relying at least in part on the *arbiter* of *Wasserman* to reject independent method claim 29. It is well settled that "if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device." However, there is no indication in the Office Action that the *arbiter* of *Wasserman* in its "normal and usual operation" would necessarily perform the method claimed in independent claim 29.

Furthermore, Applicants respectfully remind the Examiner that in order to make a prima facie case of anticipation, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim" and that each and every element as set forth in the claim must be found in the reference. Applicants submit that such detail is lacking in *Wasserman* and the Office Action fails to clearly explain why the Examiner believes that such detail is present in *Wasserman*. As just one example, Applicants submit that *Wasserman* does not teach or suggest "determining compute resource availability".

Independent Claim 35

Claim 35 recites "a second switching fabric . . . operable to selectively couple outputs of the plurality of graphics pipelines to inputs of the plurality of compositors". The Office Action directs the Applicants to *"display timing generators, master/slave, synchronization of data streams,* Page 15, Paragraphs 173-180." Applicants did not find any teaching or suggestion for "a second switching fabric", let alone "a second switching fabric . . . operable

to selectively couple outputs of the plurality of graphics pipelines to inputs of the plurality of compositors" in the cited portion of *Wasserman*.

Therefore, Applicants respectfully request reconsideration of the rejection and allowance of claims 1, 4, 9, 22, 29 and 35.

DEPENDENT CLAIMS

Dependent claims 2-3, 5-8, 10-21, 23-28, 30-34 and 36-39 are each directly or indirectly dependent from one of the independent claims. Accordingly, it is respectfully submitted that the dependent claims are allowable not only because of their dependency from their respective independent claims for the reasons discussed above, but also in view of their novel claim features.

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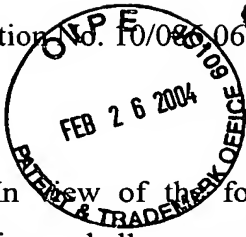
CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration of the application and allowance of all pending claims.

Please charge any deficiency payment or credit any overpayment associated with this communication to Deposit Account No. 08-2025 of Hewlett-Packard Company.

Respectfully submitted,

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